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Takao, et al.

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For: OPERATION SCREEN SIMPLE-CREATING SYSTEM FOR A REMOTE CONTROL TERMINAL

Honorable Commissioner of Patents
Alexandria, VA 22313-1450
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SUBMISSION OF VERIFIED TRANSLATION OF PRIORITY DOCUMENT

Dear Sir:

Applicant herewith submits a Verified Translation of the Priority Document of the present Application (Japanese Patent Application No. 2000-019141) which was filed on January 27, 2000.

Respectfully Submitted,

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VERIFICATION

The undersigned hereby declares that he/she is conversant with Japanese and English languages and that he/she is the translator of the documents attached and certifies that to the best of his knowledge and belief the attached is a true and correct translation of:

Japanese Patent Application No. 2000-019141 filed on January 27, 2000

片岡之典 February 4, 2005

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JAPANESE PATENT APPLICATION 2000-19141

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JAPANESE PATENT APPLICATION 2000-19141

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JAPANESE PATENT APPLICUATION 2000-019141

[Document] SPECIFICATION

[Title of the Invention] OPERATION SCREEN SIMPLE-CREATING SYSTEM FOR A REMOTE CONTROL TERMINAL

[What is Claimed is]

[Claim 1] An operation screen simple-creating system for creating an operation screen used for a remote controlling terminal that controls remotely a terminal connected to a communication line, comprising:

a paste-up information receiving unit for receiving paste-up information to paste on the operation screen;

a paste-up information setting unit for setting the position and size of said paste-up information to be pasted on the operation screen; and

an operation screen creating unit for creating a new operation screen through setting by said paste-up information setting unit.

[Claim 2] The operation screen simple-creating system as claimed in claim 1, wherein said paste-up information receiving unit includes at least one of an image data reading unit being capable of receiving picture image data and a text sentence receiving unit being capable of receiving text sentence.

[Claim 3] The operation screen simple-creating system as claimed in claim 1 or 2, wherein said paste-up information receiving unit reads out said paste-up information from a file being recorded in a connected external memory device being communicable from the

remote controlling terminal.

[Claim 4] The operation screen simple-creating system as claimed in any of claims 1 to 3, wherein said paste-up information setting unit undertakes an automatic positioning setting process for coinciding a barycenter of said paste-up information received by said paste-up information receiving unit with a predetermined point in the operation screen.

[Claim 5] The operation screen simple-creating system as claimed in claims 1 to 4, wherein said operation screen creating unit creates plurally said operation screen information having different design all at one time based on a common setting value with regard to a size and a position in which past-up information should be pasted.

[Claim 6] The operation screen simple-creating system as claimed in any of claims 1 to 5, includes a paste-up information storing unit being connected in a communicable way from more than one aforementioned description, stores a setting value relating to a position and a size of said paste-up information set by said paste-up information setting unit in said paste-up information storing unit connected to said telecommunication line, and is capable of updating all at once the operation screen of said one or more remote controlling terminals using said setting value of said paste-up information stored in said paste-up information storing unit.

[Claim 7] An operation screen simple-creating method for creating an operation screen used for a remote controlling terminal that

remotely controls a terminal connected to a communication line, characterized in receiving paste-up information to paste on the operation screen;

setting the position and size of said paste-up information to be pasted on the operation screen; and

creating a new operation screen by synthesizing said operation screen and said paste-in picture image.

[Claim 8] A recording medium that stores a program for creating an operation screen used for a remote controlling terminal capable of operating remotely a terminal connected by way of a telecommunication line characterized in receiving paste-up information to paste on the operation screen; setting the position and size of said paste-up information to be pasted on the operation screen; and creating the new operation screen by synthesizing said operation screen and said paste-in picture image.

[Detailed Description of the Invention]

[0001]

[Field of the Invention]

The present invention relates to a system for creating an operation screen for a remote control terminal. In particular, the present invention relates to a system for creating an operation screen for a remote control terminal whose users are able to customize one or more operation screens displayed on a remote control terminal. The present invention may be applied preferably to a creation of operation screens for a printer remote controlling

terminal.

[0002]

[Description of the Related Art]

A printer remote controlling terminal, which can control remotely a printer connected to a communication line, has been known. When creating an operation screen for this type of printer operating system, each screen is made individually. At this point, a printer operating system is described as an example of a system using a remote controlling terminal.

[0003]

[Problems to be Solved by the Invention]

A system for printing using a printer remote controlling terminal capable of controlling remotely a printer connected to a communication line may be offered as a service described in the following. That is to say, a company has a printer capable of printing out high quality pictures far better than the other printers used in public and also has a lot of printer remote controlling terminals that can control remotely the printer. This is a service in which these printer remote controlling terminals are utilized by customers and the customers print out images that they want to print out using the high quality picture printer. The company which provides this service may want to display its company name, company logos, and messages to the customers on the operation screen of the printer remote controlling terminal and may want to make company's PR campaigns and improve service to the customers.

However, there have been many different kinds of screen pages, such as an initial screen and a print in-progress screen, etc., for the operation screens of the conventional printer remote controlling terminal, therefore it has taken a lot of time and effort to make these one by one.

[0004]

At this point, though Toku-Kai-Hei 7-307817 has disclosed an art, as a reference, for altering displays of operation screens of a facsimile apparatus, it has not been possible to reduce the burden of creating operation screens for companies as described above by only altering the predetermined layouts of menu items.

[0005]

In the description for the aforementioned problems, a printer is sampled as a terminal. The same types of problems may be applied to remote controlling terminals other than printers.

[0006]

Therefore, it is an object of the present invention to provide a system for creating simply an operation screen for a remote control terminal, which is capable of overcoming the above drawbacks. The objects thereof can be achieved by combining the characteristics recited in the independent claims of the patent claims. Further, the dependent claims define further advantageous examples of the present invention.

[0007]

[Means to Solve the Problems]

That is to say, in accordance with the first embodiment of the present invention, an operation screen simple-creating system for creating an operation screen used for a remote controlling terminal that remotely controls a terminal connected to a communication line, includes: a paste-up information receiving unit for receiving paste-up information to paste on the operation screen; and an operation screen creating unit for creating a new operation screen through setting by said paste-up information setting unit.

[0008]

The paste-up information receiving unit may include at least one of an image data reading unit being capable of receiving picture image data and a text sentence receiving unit being capable of receiving a text sentence. The paste-up information receiving unit may read out paste-up information from a file recorded in a connected external memory device being communicable from the remote controlling terminal.

[0009]

The paste-up information setting unit may undertake an automatic positioning setting process for coinciding a barycenter of paste-up information received by the paste-up information receiving unit with a predetermined point in the operation screen. The operation screen creating unit may create plurally operation screen information having different design all at one time based on a common setting value with regard to a size and a position

in which past-up information should be pasted.

[0010]

The operation screen simple-creating system for the terminal of operating remotely may include a paste-up information storing unit being connected in a communicable way from more than one remote controlling terminal, may store a setting value relating to a position and a size of paste-up information set by the paste-up information setting unit in the paste-up information storing unit connected to the telecommunication line, and be capable of updating all at once the operation screen of one or more remote controlling terminals using the setting value of paste-up information stored in the paste-up information storing unit.

[0011]

In accordance with the second embodiment of the present invention, an operation screen simple-creating method for creating an operation screen used for a remote controlling terminal that controls remotely a terminal connected to a communication line, characterized in receiving paste-up information to paste on the operation screen; setting the position and size of paste-up information to be pasted on the operation screen; and creating a new operation screen by synthesizing the operation screen and the paste-in picture image.

[0012]

In accordance with the third embodiment of the present invention, A recording medium that stores a program for creating

easily by a computer an operation screen used for a remote controlling terminal capable of operating remotely a terminal connected by way of a telecommunication line is provided. In this recording medium, there are recorded programs of receiving paste-up information to paste on the operation screen; setting the position and size of paste-up information to be pasted on the operation screen; and creating the new operation screen by synthesizing the operation screen and the paste-in picture image.

[0013]

At this point, the summary of the aforementioned invention does not itemize all of characteristics necessary to the present invention, but the sub-combinations of such characteristics can also be the invention.

[0014]

[Preferred Embodiments of the Invention]

In the following, though the invention will now be described based on the embodiments of the invention, the following embodiments do not limit the invention with regard to the claims. Further, all of the combinations of the characteristics explained in the embodiments are not necessarily required to means to solve the invention.

[0015]

In the present embodiment, the present invention is applied to a system for operating a printer in a remote manner. At this point, the present invention is not limited to the system for

operating the printer in a remote manner.

[0016]

FIG. 1 is a printer remote controlling system 12 to which the embodiment of the present invention is applied. The printer remote controlling system 12 includes a printer 30, a printer server 40, a communication line 50, a printer remote controlling terminal 20, and an operation screen 60.

[0017]

The printer remote controlling terminal 20, the printer 30, and the printer server 40 are connected to the communication line 50. The print command instructed by the operation screen 60 of the print remote controlling terminal 20 is sent to the printer server 40. The printer server 40 which has received the print command performs the control of executing a printing operation to the printer 30.

[0018]

It is supposed that such a printer remote controlling system is operated as the following service. That is to say, some company has a printer capable of printing out a high quality picture image far better than a printer which is used in general as a printer being connected by way of a telecommunication line and also has a lot of printer remote controlling terminals that can remote control the printer. This is a service where these printer remote controlling terminals are provided to the customer and the customer prints out the picture images that they want to print out using

the high quality picture printer. Using the company that provides this type of service ("printer service" is defined hereinafter) as an example, the description will follow.

[0019]

FIG. 2 is a schematic diagram showing an operation screen simple-creating system 10 for terminals to control remotely a printer according to the present embodiment of the present invention. The operation screen simple-creating system 10 includes a paste-up information receiving unit 70, a paste-up information setting unit 80, an operation screen creating unit 100, and an input device 102 (a mouse or a keyboard and the like).

[0020]

The paste-up information receiving unit 70 undertakes the process to read out paste-up information 280 stored in an external memory device 140, which can be communicated from the printer remote controlling terminal 20. This procedure is executed in a picture image data reading unit 130 if the paste-up information 280 which is read out is the image data 200. In the case where the paste-up information 280 which is read out is the text sentence 210, this procedure is performed in the picture image data reading unit 130.

[0021]

At this point, the image data 200 is, for example, the name or logos of a company that provides this printer service, and has a PR effect for the company. The text sentence 210 is a message or the like to customers who use the printer service and aims to

improve the service.

[0022]

In the following, in order to make the sentences here simple, it is defined that the paste-up information 280 means the picture image data 200 or the text sentence 210.

[0023]

For the paste-up information 280 received by the paste-up information receiving unit 70, the process of pasting on the operation screen 60 is performed in the paste-up information setting unit 80. The paste-up information setting unit 80 will be described in detail hereinafter.

[0024]

After a setting value to paste the paste-up information 280 on the operation screen 60 is decided, a new operation screen 60 is created in the operation screen creating unit 100 in accordance with setting by the paste-up information setting unit 80.

[0025]

A series of processes undertaken by the paste-up information setting unit 80 and the operation screen creating unit 100 may be undertaken for different operation screens 60, such as an initial screen or a print in-progress screen of the operation screen simple-creating system, all together. This process may easily create an operation screen simple-creating system having operation screens with unified designs such as message sentences, etc., and the arrangement of the company logos and the like.

[0026]

The paste-up information setting unit 80 is described in detail.

[0027]

FIG. 3 illustrates the outline of the process for pasting paste-up information on an operation screen. The upper part of FIG. 3 illustrates an example of the operation screen 60 before pasting paste-up information is pasted. The lower part of FIG. 3 illustrates an exemplary operation screen after pasting paste-up information has been pasted. The operation screen 60 before paste-up information is pasted includes a background screen 270 and information pasting regions 240 which are capable of pasting paste-up information 280. The position and the size of the information pasting regions 240 have been previously determined.

[0028]

The paste-up information 280 which the paste-up information 70 obtains is pasted on the preset information pasting regions 240 which have been set at first in advance. In the event of pasting, it may be possible to perform an automatic positioning process as being described hereinafter in FIG. 4.

[0029]

In the lower part of FIG. 3, the text sentence 210, in which the text sentence 210 expressing a message of customers and the picture image data 200 of a company name and logos are read out by the paste-up information receiving unit 70, is pasted in the

paste-up information 280. Further, operation button images 202 as operation buttons for executing a printing process, etc., may be pasted on the information pasting region 240 as image data for pasting and are shown at the lower part of the lower view of FIG. 3.

[0030]

After paste-up information 280 is pasted on the operation screen 60, the position and size of the information pasting regions 240 are capable of being edited by way of the input device 102 (a mouse, for example). The text sentence 210 is capable of being edited by the input device 102 (a keyboard, for, example).

[0031]

According to the aforementioned process, since the operation screen 60 is capable of being created using a setting value for a predetermined fixing method using an arbitrary picture image data 200 or the text sentence 210, it is extremely easier when the case where the operation screen is created from the beginning is compared.

[0032]

FIG. 4 illustrates the automatic positioning process when paste-up information is pasted. This process is performed by way of the paste-up information setting unit 80. In the automatic position setting process (the lower view of FIG. 4), a paste-up information barycenter 300 is obtained from the form of the paste-up information 280. Further, a paste-up information region center

320 is obtained from the paste-up information region information pasting region 240. If the paste-up information 280 is the text sentence 210, the center of the text sentence is used instead of the paste-up information barycenter 300. When the paste-up information 280 is pasted on the information pasting region 240, the paste-up information barycenter 300 is pasted in such a way of coinciding with the paste-up information region center 320. On the other hand, for the positioning process illustrated in the upper view of FIG. 4, first of all the left upper point of the paste-up information 280 is defined as a paste-up information standard point 310. When the paste-up information 280 is pasted on the information pasting region 240, the paste-up information basing point 310 is pasted in such a way of coinciding with the paste-up information region center 320. When both of processes are compared, the automatic position setting process, in which the paste-up information barycenter 300 is pasted in such a way of coinciding with the paste-up information region center 320, is capable of making it real to have a good balanced arrangement even if any shape of the paste-up information 280 is formed, when the case where the paste-up information basing point 310 is matched with the paste-up information region center 320 is compared.

[0033]

Moreover, the paste-up information setting unit 80 may undertake the automatic process as described below with regard to setting the size of the paste-up information 280.

[0034]

If the paste-up information 280 is smaller than the preset information pasting region 240 and a wide margin is caused in the information pasting region 240, or if the paste-up information is bigger than the preset information pasting region 240 and occupies beyond the information pasting region 240, the size of the paste-up information 280 may be automatically changed so as to come to be maximum in the scope of the information pasting region 240 (not shown in the drawing).

[0035]

According to such, it is possible to create automatically a picture screen which customers can easily look at regardless of the size of the paste-up information 280.

[0036]

When all of the paste-up information 280 is ready to be pasted, the information pasting region 240 is erased. Therefore, in the part of the information pasting region 240 that has not been pasted, the background screen 270 is displayed.

[0037]

FIG. 5 illustrates the outline of the structure in which a connected paste-up information storing unit, which is connected with one or more printer remote controlling terminals in a communicable way, is installed. The paste-up information storing unit 90 is connected with one or more printer remote controlling terminals 20 in a communicable way. In FIG. 5, the paste-up

information storing unit 90 is equipped in the printer server 40. Further, the external memory device 140 of the printer remote controlling terminal 20 may function as the paste-up information storing unit 90.

[0038]

The setting value for pasting the paste-up information 280 which has been set in the paste-up information setting unit 80 may be recorded in the paste-up information storing unit 90. It may be possible to read out the setting value recorded in the paste-up information storing unit 90.

[0039]

Thus, if one setting value relating to the paste-up information 280 of the operation screen 60 is created and recorded and if the setting value is read out as the common value, it comes to be possible to change at once all of the operation screens 60 of one printer remote controlling terminal 20.

[0040]

Further, it is possible to perform the process of changing all the operation screens 60 of one or more printer remote controlling terminals 20 using the common paste-up information 280 and the recorded setting value if the communication line 50 is employed. That is to say, it comes to be possible to change the setting value of the same paste-up information 280 as the operation screen 60 of other printer remote controlling terminals 20 according to any needs, in the side of a plurality of the printer

remote controlling terminals 20. Furthermore, it is possible to alter the operation screens 60 of a plurality of the printer remote controlling terminals 20 all together using the setting value of the common paste-up information 280 from the side of controlling the printer remote operating system.

[0041]

Therefore, companies that provide the printer service are capable of managing the operation screens 60 using the communication line 50 for sending a printing command of the printer originally, and thus it comes to be possible to achieve an effective operation of the printer remote controlling system.

[0042]

In this way, although the present invention has been explained using embodiments, the technical scope of the present invention is not limited to the scope recited in the aforementioned embodiments. It is possible to add various modifications and improvements to the aforementioned embodiments. It is obvious from the recitation of the scope of the patent claims that the embodiments to which such modifications or improvements are added are included in the scope of the technical scope of the present invention. For example, it is possible that the present invention is made real in the form of a recording medium in which a program of enabling a computer to execute a process which is performed by the aforementioned screen creating system is recorded.

[0043]

[Advantages of the Invention]

As obvious from the aforementioned explanation, according to the present invention, it is possible to create an operation screen in an easy manner, which is used in a remote operation terminal capable of operating a printer or the like connected by way of a telecommunication line.

[Brief Description of the Drawings]

[Fig. 1] A printer remote controlling system to which the embodiment of the present invention is applied.

[Fig. 2] A schematic diagram showing an operation screen simple-creating system for a printer remote operation system with regard to the embodiment of the present invention.

[Fig. 3] An illustration of the outline of the process for pasting paste-up information on an operation screen.

[Fig. 4] An illustration of the automatic positioning process when paste-up information is pasted.

[Fig. 5] An illustration of the outline of the structure in which a connected paste-up information storing unit, which is connected with one or more printer remote controlling terminals in a communicable way, is installed.

[List of the Elements]

10 Operation screen simple-creating system for terminals to remote control a printer

12 Printer remote controlling system

20 Printer remote controlling terminal

30 Printer

40 Printer server

50 Communication line

60 Operation screen

70 Paste-up information receiving unit

80 Paste-up information setting unit

90 Paste-up information storing unit

100 Operation screen creating unit

102 Input device

110 Text sentence obtaining unit

120 Text sentence background obtaining unit

130 Picture image mage data reading unit

140 External memory device

200 Picture image data

202 Operation button images

210 Text sentence

220 Text sentence background

230 Operation button

240 Information pasting region

270 Background screen

280 Paste-up information

300 Paste-up information barycenter

310 Paste-up information region center

320 Paste-up information region center

JAPANESE PATENT APPLICUATION 2000-019141

[Document] ABSTRACT

[Summary]

[Object] To provide an operation screen simple-creating system for a printer remote operation terminal for creating an operation screen of the printer remote operation terminal in an easy manner. [Means for Achieving the Object] An operation screen simple-creating system for creating an operation screen 60 used for a remote controlling terminal 20 which is capable of controlling remotely a terminal connected to a telecommunication line, which includes: a paste-up information receiving unit 70 for receiving paste-up information to paste on the operation screen 60; a paste-up information setting unit 80 for setting the position and size of the paste-up information to be pasted on the operation screen 60; and an operation screen creating unit 100 for creating a new operation screen 60 by synthesizing the operation screen 60 and the pasted-up picture image.

[Selected Figure] FIG. 2

JAPANESE PATENT APPLICUATION 2000-019141

[Document name] Drawings

[Fig. 1]

30 PRINTER

40 PRINTER SERVER

50 COMMUNICATION LINE

60 OPERATION SCREEN

20 PRINTER REMOTE CONTROLLING TERMINAL

[FIG. 2]

A1 PASTE-UP INFORMATION

140 EXTERNAL MEMORY DEVICE

200 PICTURE IMAGE DATA

210 TEXT SENTENCE

70 PASTE-UP INFORMATION RECEIVING UNIT

80 PASTE-UP INFORMATION SETTING UNIT

102 INPUT DEVICE

100 OPERATION SCREEN CREATING UNIT

[FIG. 3]

B1 OPERATION SCREEN

B2 BEFORE PASTING

B3 OPERATION SCREEN

B4 AFTER PASTING

200 PICTURE IMAGE DATA

210 TEXT SENTENCE

[FIG. 4]

240 INFORMATION PASTING REGIONS

240 INFORMATION PASTING REGIONS

280 PASTE-UP INFORMATION

[FIG. 5]

30 PRINTER

40 PRINTER SERVER